Titel:
Title:

CGS 6.4.0 SW Release Notes

Dokumenten Typ:
Document Type: Technical Note

Dokumentenklasse:
Document Class: N/A

Klassifikations-Nr.:
Classification No.: N/A

Dokumentenkategorie:
Document Category: N/A

Konfigurations-Nr.:
Configuration Item No.: 1130992

Produktklassifizierungs-Nr.:Classifying Product Code: N/A

Freigabe Nr.:
Release No.: N/A

Bearbeitet: Prepared by:	St. Marz	**Org. Einh.:** Organ. Unit:	TE55	**Unternehmen:** Company:	EADS ST
Geprüft: Agreed by:	J. Bitomsky	**Org. Einh.:** Organ. Unit:	TE5Q	**Unternehmen:** Company:	EADS ST
Genehmigt: Approved by:	J. Frank	**Org. Einh.:** Organ. Unit:	TE55	**Unternehmen:** Company:	EADS ST
Genehmigt: Approved by:		**Org. Einh.:** Organ. Unit:		**Unternehmen:** Company: Agency:	

Copyright by Astrium - All Rights Reserved

Attribut-Liste/List of Attributes

Vertrags Nr.:
Contract No.:

Dokument Ref.Nr.:
Document Ref.No.:

Lieferbedingungs Nr.:
DRL/DRD No.:

Seitenzahl Dokument-Hauptteil:
Pages of Document Body: 2

Schlagwörter:
Headings:

Erstellungssystem:
S/W Tool: Word 97

CGS SW Release Notes

Kurzbeschreibung:
Abstract:

This document issue provides the description of the CGS SW release 6.4.0 based on CGS 6.3.6 release.

Copyright by Astrium - All Rights Reserved

DCR Daten/Dokument-Änderungsnachweis/Data/Document Change Record

Überarbeitung Revision	**Datum** Date	**Betroffener Abschnitt/Paragraph/Seite** Affected Section/Paragraph/Page	**Änderungsgrund/Kurze Änderungsbeschreibung** Reason for Change/Brief Description of Change
2/-	30.04.2004	All	Initial release (6.2.0)
2/G	22.10.2004	All	Final version for 6.2.2 (B14)
4/-	18.02.2005	All	Final version for 6.2.3
6/-	22.04.2005	All	Final version for 6.2.4
7/-	03.06.2005	All	version for 6.2.5 (B24)
8/-	03.06.2005	All	Final version for 6.2.5 identical to 7/-
10/-	14.10.2005	All	Final version for 6.3.0 identical to 9/-
12/-	03.04.2006	All	version for 6.3.0
13/-	13.10.2006	All	version for 6.3.1
13/-	13.10.2006	All	version for 6.3.1
14	10.11.2006	All	version for 6.3.1.1
15	02.02.2007	All	version for 6.3.1.2
16	13.04.2007	All	version for 6.3.2
17	11.05.2007	All	version for 6.3.3
18	15.06.2007	All	version for 6.3.4
19	07.09.2007	All	version for 6.3.5
20	28.09.2007	All	version for 6.3.6
21	09.11.2007	All	version for 6.4.0

Copyright by Astrium - All Rights Reserved

Table of Contents

1 INTRODUCTION 1
1.1 Identification and Scope 1
1.2 Purpose 1
1.3 Document Layout 1
2 APPLICABLE AND REFERENCE DOCUMENTS 2
3 RELEASE OVERVIEW 4
3.1 CCU Version Identification 4
3.2 Integrated Products 4
3.3 Release Media and their Contents 4
3.4 Identification of the Generation and Test Environment 4
4 SW RELEASE STATUS 5
4.1 Release Status 5
4.2 Test Status 5
4.3 Commercial Baseline 5
4.4 Compatibility Statement 5
4.5 New or Updated Components 6
4.6 New features in CGS_6.4.0 6
4.6.1 CGS CONFIGURATION 6
4.6.2 CGS DELIVERY 7
4.6.3 CIS : Processing of HLCL login sequence 7
4.6.4 CIS : USER LOGIN 8
4.6.5 CGS COLOR CODING - MONITORING WINDOW 8
4.6.6 CGS MDB CHANGES 9
4.6.7 CGS HOUSEKEEPING VALUES - XML SCOE GENERATOR 10
4.6.8 CGS REPLAY MODE 10
4.6.9 CGS START CENTER 10
4.6.10 CGS SYSTEM LIBRARY USAGE 11
4.6.11 CGS USS INTEGRATION 11
4.6.12 ONLINE CONTOL ICONS 11
4.6.13 TEV - EVALUATION TOOL 12
4.6.14 Raw Data Dump Tool including Packets Navigator 14
4.6.15 Packets Navigator 16
4.6.16 Data Set Tool including One Shot Data Listing 16
4.6.17 One Shot Graph (available only for TEV Batch) 16
4.6.18 Incompatibilities with respect to CGS 6.3 16

Copyright by Astrium - All Rights Reserved

4.7 SW PROBLEM STATUS 17
4.7.1 SPR Status and Impact Analysis 17
4.7.2 Temporary Fixed Problems 20
4.7.3 Further Open Problems 20
4.7.4 Known Restrictions 20
4.7.5 Known Bugs and Workarounds 20
5 INSTALLATION PROCEDURES 21
5.1 Complete Installation 21
5.2 Patch Installation (based on CGS 6.3.6) 21
5.2.1 Needed passwords 21
5.2.2 Installation steps 21
5.3 Oracle RAC installation for CGS 23
5.3.1 Prerequisites 23
5.3.2 Oracle RAC installation 23
5.3.3 Oracle Database Instance Creation 23
5.3.4 CGS Tablespace creation 23
5.3.5 Installation CGS application databases 24
6. ACRONYMS 25

Copyright by Astrium - All Rights Reserved

1 Introduction

1.1 Identification and Scope

This document is the CGS 6.4.0 SW Release Notes. The release is identified by document CGS SRO [AD 2].

CI Name : CGS SW

CI Number : 1130992

CI Variant : 6.4.0

1.2 Purpose

The purpose of this software release is a delivery with fixed problems.

1.3 Document Layout

This document has the following layout:

Chapter 1 provides the document identification and identifies under which CI this document is prepared. It also identifies the next higher level component CI. Chapter 1 also provides an overview of the purpose of the document and the overall document structure.

Chapter 2 provides the list of documents which are applicable or are referenced.

Chapter 3 provides an overall description of the release. Thus in this chapter all SW products being integrated are listed including the temporary fixes necessary to run the SW. This chapter also provides the identification of CCU versions being used for the SW product integration (if any).

Chapter 4 provides an overview of the release status. This includes a statement on the current test status and the identification of SPRs being fixed with this release.

Chapter 5 provides the installation instruction for the CGS SW.

Appendix A provides a list of abbreviations being used

Appendix B provides a list of terms being used in a certain sense.

Appendix C provides the file listing of the delivery.

Copyright by Astrium - All Rights Reserved

2 Applicable and Reference Documents

CGS Documents:

	name	issue	date
Technical Note			
CGS-RIBRE-TN-0001	CGS SW Release Notes (Linux)	21	09.11.2007
CGS-RIBRE-TN-0002	The CGS Authorization Concept	2/B	04.09.2006
SW Release Order			
CGS-RIBRE-SRO-0006	CGS Software Release Order (Linux)	21	09.11.2007
User Manuals			
CGS-RIBRE-SUM-0001	CGS User Manual	7/-	13.10.2007
CGS-RIBRE-SUM-0002	CGS Installation Manual (Linux)	2/E	11.09.2007
CGS-RIBRE-SUM-0003	MDA Reference Manual	1/D	25.10.2006
CGS-RIBRE-SUM-0004	MDA Administration Manual - see COL	1/-	
CGS-RIBRE-SUM-0005	DADIMA Reference Manual	1	09.11.2001
CGS-RIBRE-SUM-0006	DADIMA Administration Manual	1	09.11.2001
CGS-RIBRE-SUM-0007	GWDU User's and Operations Manual	2	28.08.2006
CGS-RIBRE-MA-0001	UCL Debugger User Manual	1	01.09.2004
CGS-RIBRE-MA-0003	call - A tool to add a graphical user interface to command line based programs	1/-	01.03.2006
CGS-RIBRE-MA-0004	"mdb - MDB Access Tool"	1/-	01.03.2006
CGS-RIBRE-MA-0005	"generate - Text Generation Tool"	1/-	01.03.2006
CGS-RIBRE-MA-0006	CDU Merge Users Manual	1	14.03.2006
CGS-RIBRE-MA-0007	Start Center - A generic user interface for multi-process systems	1/C	04.09.2007
CGS-RIBRE-MA-0008	An XML Based Configuration Concept	1/-	01.10.2006
COL-RIBRE-MA-0018-00	MDA Administration Manual	4/B	31.03.2000
COL-RIBRE-MA-0030-00	MDA Introduction Manual	3/B	04.04.1997
COL-RIBRE-MA-0037-00	DADIMA Introduction Manual	3	04.04.1997
COL-RIBRE-MA-0046	SID Range Tool Users and Operations Manual	1	15.09.1997
Reference Manuals			
CGS-RIBRE-STD-0001	User Control Language (UCL) Reference Manual	3/-	01.12.2005
CGS-RIBRE-STD-0002	High Level Command Language (HLCL) Reference Manual	3/A	04.05.2006
CGS-RIBRE-STD-0003	Virtual Stack Machine and I-Code Reference Manual	3/-	01.12.2005
COL-RIBRE-STD-0008	Reference Manual for Crew Procedure Language and Software, Commanding	1/F	31.10.2001
Requirements Specifications			
CGS-RIBRE-SPE-0001	Columbus Ground System (CGS) Requirement Specification	2/D	23.03.2004
CGS-RIBRE-SPE-0002	CGS Test Case Specification and Test Procedure	4/-	30.08.2006

Copyright by Astrium - All Rights Reserved

Design Documentation

	Columbus Ground System (CGS)		
COL-RIBRE-ADD-0006	Software Architectural Design Document	4/B	30.10.1998

Interface Definitions

CGS-RIBRE-ICD-0001	System to CGS ICD	1/-	31.01.2002
CGS-RIBRE-ICD-0002	MDB Standard Entities and Application Program Interface	1/-	

USS Documents:

	name	issue	date
SW Release Note			
COL-RIBRE-RN-0255	USS 2.15.0 Software Release Document	12	05.11.2007
SW Release Order			
ESO-IT-SRO-0071	USS SW V2.15.0	1	02.11.2007

Copyright by Astrium - All Rights Reserved

3 Release Overview

3.1 CCU Version Identification

This CGS SW Release provides no mission database content.

3.2 Integrated Products

In following table all SW components are identified necessary to build this release of the CGS SW.

- CGSI
- CLS
- DBS / Command History
- GWDU
- HCI
- MDA / CGS_MDB_V6_4_0
- TES
- TEV
- TSCV
- TSS
- CGS_API

3.3 Release Media and their Contents

The System is delivered on CD as being identified in Table 1.

Data Carrier ID	*Title / Contents*	*Receiver*
CGS-RIBRE-DC-0266	*CGS_6.4.0_LINUX (Master)*	*Dcc*
CGS-RIBRE-DC-0267	*CGS_6.4.0_LINUX (Backup)*	*GSEtE CM*
CGS-RIBRE-DC-0268	*CGS_6.4.0_LINUX optional (Master)*	*Dcc*
CGS-RIBRE-DC-0269	*CGS_6.4.0_LINUX optional (Backup)*	*GSEtE CM*
CGS-RIBRE-DC-0270	*CGS_6.4.0_LINUX Test SW (Master)*	*Dcc*
CGS-RIBRE-DC-0271	*CGS_6.4.0_LINUX Test SW (Backup)*	*GSEtE CM*
CGS-RIBRE-DC-0272	*CGS_6.4.0_LINUX Debug Executable (Master)*	*Dcc*
CGS-RIBRE-DC-0273	*CGS_6.4.0_LINUX Debug Executable (Backup)*	*GSEtE CM*

Table 1 : Identification of Data Carriers

This delivery contains online documentation only.

3.4 Identification of the Generation and Test Environment

The CGS SW Generation environment is described in chapter 5 of the release notes of ref. [AD 2].

This version is internal identified by PDB checkpoint CGS_6.4.0_B4_LINUX**.**

Copyright by Astrium - All Rights Reserved

4 SW Release Status

4.1 Release Status

The release status is: **FORMAL RELEASE**

The SPRs fixed in this release have been regression tested as documented in the CGS SPRdb.

It has been assessed that the code changes have no impact to the qualification status of other SW modules of CGS as released in former versions.

4.2 Test Status

This CGS SW was tested on commercial baseline. The test status is delta qualified by CGS - AIV.

4.3 Commercial Baseline

- ✓ Suse Linux Enterprise Server 8 / ServicePack3
- ✓ Oracle 9.2.0.5 (remark: for security reasons it is possible to use Oracle 9.2.0.8)
- ✓ Gipsy 4.2.2 based on glibc 2.2
  - with patch for call pr-3437
  - with libdvt11.0.so for Gipsy 4.2.2 / Linux of 14.06.2005
- ✓ Dataviews 9.9
- ✓ CGS API with gnat 5.0.4a
- ✓ CIS CORBA Server built with PrismTech OrbAda 2.7.0 (CORBA 2.5, GIOP 1.2)
- ✓ USS 2.15 (*)

This CGS SW release shall be executed on Intel PC with SUSE Linux Enterprise Server 8 (SLES8) based environments.

For using Oracle RAC installation only (see 5.3):

- ✓ Suse Linux Enterprise Server 9 / ServicePack 2
- ✓ Oracle RAC 10gR2 (Version 10.2.0.2)

(*) marked components are available on CGS delivery

4.4 Compatibility Statement

The software is based on CGS 6.3.6.

- ✓ The SAS build with the CGS API (CGS version 6.3.1 … 6.3.6) are compatible to CGS version 6.4.0, but due to some changes in communication software CGS recommend to re-build the SAS with CGS 6.4.0 API.
- ✓ The Corba clients build with the CGS IDL (CGS version 6.3.0 … 6.3.6) are compatible to CGS version 6.4.0.
- ✓ Definitions for the Raw Data Dump Tool saved with TEV Interactive in CGS 6.3 (i.e. definitions in binary format) cannot be used any more, they should be deleted.

Copyright by Astrium - All Rights Reserved

4.5 New or Updated Components

All software components are updated.

4.6 New features in CGS_6.4.0

What's new in CGS_6.4.0 (in difference to CGS 6.3.3 and later)?

4.6.1 CGS CONFIGURATION

- New configuration parameters are:

  ✓ **NWSW.WAIT_FOR_CB_CONN_REQ_OCC_TO_END**

  Default timeout the RECV-task waits in milli seconds.
  This timeout is used on server side only. It defines the maximum time between the reception of the connection-establishment request and its end-of-processing in the application.
  To be more accurate: it defines the maximum time between the reception of the internal message send by the client to identify himself and the time the application has executed the 'Connection-Request-From-Remote-Occured' callback.
  Range: Positive [ms]
  Recommended value: 2000

  ✓ **NWSW. WAIT_FOR_NWSW_TO_INITIALIZED**

  Default timeout used in case of concurrent initialisation requests.
  This timeout is used to prevent blocking of callers in case of unexpected internal NWSW errors. If several tasks call the NWSW initialize function concurrently, just one will get exclusive access. The others have to wait for the first to finish.
  This timeout defines the maximum time, the waiters are blocked.
  Range: Positive [ms]
  Recommended value: 5000

  ✓ **DBS.RPI.ALWAYS_COPY_REPLAY_FILES**

  In preparation for sessions to be executed in replay-mode the archive files are copied from the result database (RDB) to the related testnodes ($TN_HOME/replay) in order
  to be replayed by TES. This is not really necessary in case of CGS-in-the-box environments,
  since the RDB files are directly visible by TES, and the files are created by symbolic links to the original files to save space and time. The parameter Always_Copy_Replay_Files will prevent CGS from creating symbolic links, the files will be copied instead. This could be useful to avoid disturbance of the replay session by other users archiving/deleting the original session from the RDB.

  Recommended value: false

  ✓ **CIS.CORBAINTERFACE.ONEWAYVOIDTIMEOUT**

  Maximum time (in milliseconds) for a oneway void callback to a client.
  When exceeded by a callback, the client's subscription for the corresponding service will be terminated, assuming the client is not healthy any more.
  Currently only applicable for TM/TMPacket services.

Copyright by Astrium - All Rights Reserved

- ✓ **TES.KERNEL.DDS.DISPATCH_BUFFER_START**

  Start size of the dispatch buffer (buffer of to be sent data); the dispatch buffer can be stepwise extended to DISPATCH_BUFFER_MAX size by TES.
  The user will be informed about every dispatch buffer extension in the message handler.
  Range: integer'range
  Recommended value: 50000

- ✓ **TES.KERNEL.DDS.DISPATCH_BUFFER_EXTEND**

  Size of the (automatic) extension of the dispatch buffer.
  Range: integer'range
  Recommended value: 10000

- ✓ **TES.KERNEL.DDS.DISPATCH_BUFFER_EXTEND**

  Max size of the dispatch buffer. If the max size is reached, no additional values are dispatched and its data request were cancelled by TES.
  The user will be informed in the message handler.
  Range: integer'range
  Recommended value: 100000

- Deleted configuration parameters:

  The following parameters have been removed, because they are obsolete:

  ```
  OTC_KERNEL.RESOURCES.TASKING.DATA_DISTRIBUTOR_INTERIM_BUFFER_TASK_SIZE
  ONLINE_TEST_CONTROL.SCREEN_SETUP.LINEWIDTH
  ```

4.6.2 CGS DELIVERY

- JavaRuntimeEngine (JRE) 1.4 is no longer delivered by CGS, now 1.5 and 1.6 are part of delivery only

4.6.3 CIS : Processing of HLCL login sequence

With the changes of SPR-101128 : *HLCL login sequence may delay client's next HLCL command*, CIS will now return from a client's **systemcontrolinterface.session.subscribeHLCL** CORBA request only **after** the specified HLCL login sequence has been processed.

This means that now the client has to take care to specify a sufficiently large timeout for the CIS response to the **subscribeHLCL** CORBA request, to allow the login sequence to complete before the request times out.

For Java clients based on the systemaccess Java library, this would be the timeout defined in the properties file by:

```
systemaccess.scif.client.session.RemoteSession.timeout.invoke (default=5000 ms)
```

Which timeout value is actually reasonable will, of course, depend on the login sequence used in the target environment. As a rule of thumb, it should allow for a few seconds for each imported UCL library.

Note: in the previous implementation, the **subscribeHLCL** CORBA request returned immediately, executing the login sequence in the background. This had the effect that the execution of an immediately following HLCL command from the client was unexpectedly delayed, until the login sequence running in the background had completed.

Copyright by Astrium - All Rights Reserved

4.6.4 CIS : USER LOGIN

- User connecting now not only has to exist as CGS user ('priv add <user>'), but also requires CGS privilege 'CGS:Evaluate' granted ('priv grant <user> CGS:Evaluate'). (SPR-101225)

4.6.5 CGS COLOR CODING - MONITORING WINDOW

- The color coding of Monitoring and Out-Of-Limit Display is now consistent with CGS Tools (SPR-101271)

Colors

If processing is disabled for a telemetry item, the default color is cyan. If processing is enable, the color is determined according to this table:

Acquisition Status	Monitoring Status	Delta Monitoring	Color (default)
Requested, Not_Maintained, Not_Acquired, Not_Received, Invalid	any	any	purple
Static	any	any	cyan
Acquired, Data_Interruption	In_Limits, Undefined	Disabled	turquoise
Acquired, Data_Interruption	In_Limits, Undefined	In_Limits	green
Acquired, Data_Interruption	In_Limits, Undefined	Delta_Soft_Limit_Violation (Nominal Limit)	yellow
Acquired, Data_Interruption	In_Limits, Undefined	Delta_Hard_Limit_Violation (Danger Limit)	red
Acquired, Data_Interruption	In_Limits, Undefined	Undefined	brown (rgb:c7/89/00)
Acquired, Data_Interruption	Nominal_Limit_Violation, Nominal_Low_Limit_Violation, Nominal_High_Limit_Violation	Delta_Hard_Limit_Violation	red
Acquired, Data_Interruption	Nominal_Limit_Violation, Nominal_Low_Limit_Violation, Nominal_High_Limit_Violation	else	yellow
Acquired, Data_Interruption	Danger_Low_Limit_Violation, Danger_High_Limit_Violation	any	red
Acquired, Data_Interruption	Disabled	any	turquoise

Copyright by Astrium - All Rights Reserved

4.6.6 CGS MDB CHANGES

- MDB patch installation

  There is now only one MDB patch script $CGS_HOME/patches/patch_mdb.sh. This script find the necessary actions to patch the MDB depend on the installed version.

```
patch_mdb.sh --help
Administration Commands     patch_mdb.sh
NAME
            patch_mdb.sh
SYNOPSIS
            Usage: patch_mdb.sh [--help] [--force] [--verbose]
DESCRIPTION
            This script does patch the MDB.
PARAMETERS
            --help|-h            Help
            --force|-f           force installation of the actual MDB patch
            --verbose|-v         gets more information
```

- Lock Information (SPR-101110)

  ✓ New MDA internal table MDB_LOCKS

  ✓ New stored procedures in package MDA_PROCS

  - GetLockInfo
  - SetLockInfo
  - RemoveLockInfo

- Enditem tyes for USS (SPR-101021)

  ✓ Create new end item type USS_SYMBOL_LIBRARY with same structure as USS_DISPLAY

  ✓ Convert all existing end items of type USS_DISPLAY with MIME type "application/zip/usslib" to USS_SYMBOL_LIBRARY and clear MIME type in new end item

  ✓ Delete all entries from table T_BINARY_REVISION_HISTORY where are not the last in the entry list for one USS item

  ✓ Hide attribute F_MIME_TYPE in both end item types and don't use it anymore

- Tool Invocation (refer SPR-101179, SPR-101296, SPR-101250)

  ✓ Tool: "Import USS displays" GSAF_HOME uss/bin/common/upload_to_mdb.sh TRUE Tool Scope: CCU

  ✓ Tool: "USS Sync for Execution" GSAF_HOME uss/bin/common/sync_execution.sh FALSE
  Tool Scope: CCU
  Tool Enditem: CCU USS_DISPLAY
  Tool Enditem: CCU USS_SYMBOL_LIBRARY

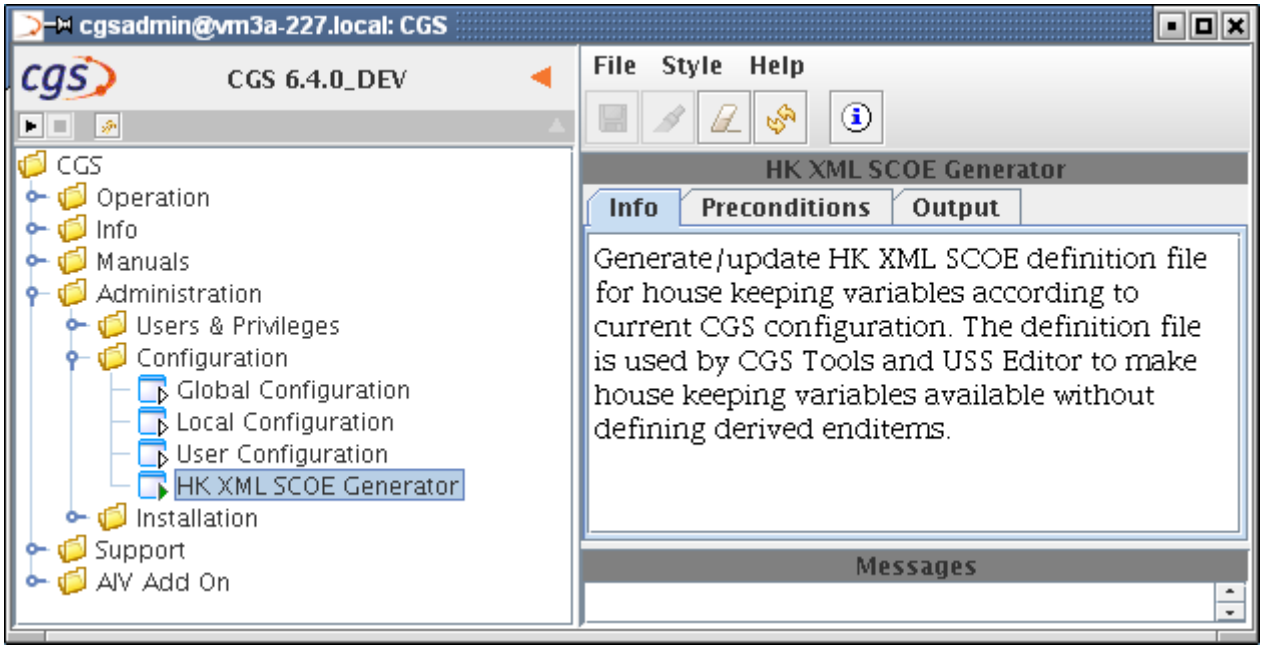
  ✓ Tool: "USS Sync for Edit" GSAF_HOME uss/bin/common/sync_edit.sh false
  Tool Scope: CCU

  ✓ Tool: "USS Update References" GSAF_HOME uss/bin/common/update_references.sh TRUE
  Tool Scope: CCU

Copyright by Astrium - All Rights Reserved

4.6.7 CGS HOUSEKEEPING VALUES - XML SCOE GENERATOR

- When new housekeeping variables have been added to a CGS configuration, they can be made available for usage in CGS Tools and USS Editor by "HK XML SCOE Generator"



4.6.8 CGS REPLAY MODE

- Archive file distribution (SPR-101312)

  For performance and disc space reasons, the archive files which are directly accessible from execution node in the TRDB are not copied from TRDB to TN_HOME local directory.

4.6.9 CGS START CENTER

- Periodic checking for preconditions

  It is possible now to define a periodic checking rate for a single precondition:

  rate the periodic checking rate for the precondition:

  rate = 0: no peridoc checking (default)
  rate = n: check precondition periodically every n seconds

- output placeholder

  In the command line of processes, the additional {output} placeholder may be used. When a process with this placeholder in its command line is started, the output of all processes (in the output subpages) is collected in a temporary file, and the {output} placeholder is substituted by the name of the temporary file. This gives a process the possibility to access the output of other processes. Only processes with non-empty output are considered.

Copyright by Astrium - All Rights Reserved

- Restriction of buffer output size (SPR-101070)

  Now it is possible to restrict the buffer output size by new configuration parameter window.output_buffer_size. When new lines are entered to an output buffer and the maximum buffer size is reached, cut off the oldest parts of the buffer contents, in order to keep the buffer contents within the buffer size restriction.

4.6.10 CGS SYSTEM LIBRARY USAGE

- Ground_Library.Write_Message_To_User (SPR-101278)

  The Ground_Library.Write_Message_To_User command is now allowed from HLCL. This allows the user to write messages to message handler via HLCL.

4.6.11 CGS USS INTEGRATION

- Importing USS Displays from File System into MDB

  When a lot of USS displays have been edited in file system, they can be imported into mission data base using IMDB. Import USS Displays can be invoked from the CCU Versions dialog.

  For details see CGS user manual section 7.3.2.4.14.4.

- USS Update References

  If a lot of telemetry parameter have been changed in mission data base, e.g. due to an import from another data base with different SID range, USS Displays can be automatically updated using "USS Update References" tool. The tool can be invoked from IMDB's CCU Versions dialog like "Import USS displays".

  For details see CGS user manual section 7.3.2.4.14.5.

- Separate project roots for Editor and Executor

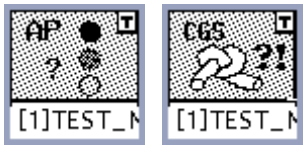
  With this release, USS integrated with CGS will use separate project roots for Editor and Executor.

  The project root for USS Executor is configured to $CGS_HOME/etc/mda/uss. When generating SCOE files or calling "USS Sync for Execution" on CCU level from IMDB, the corresponding CCU subdirectories of the executor's project root are purged to remove items from file system already deleted in MDB.

  To avoid data looses, do never use a shared project root for USS Editor and Executor!

4.6.12 ONLINE CONTOL ICONS

Updated icons for AP Status and Execution Node Status display.



Copyright by Astrium - All Rights Reserved

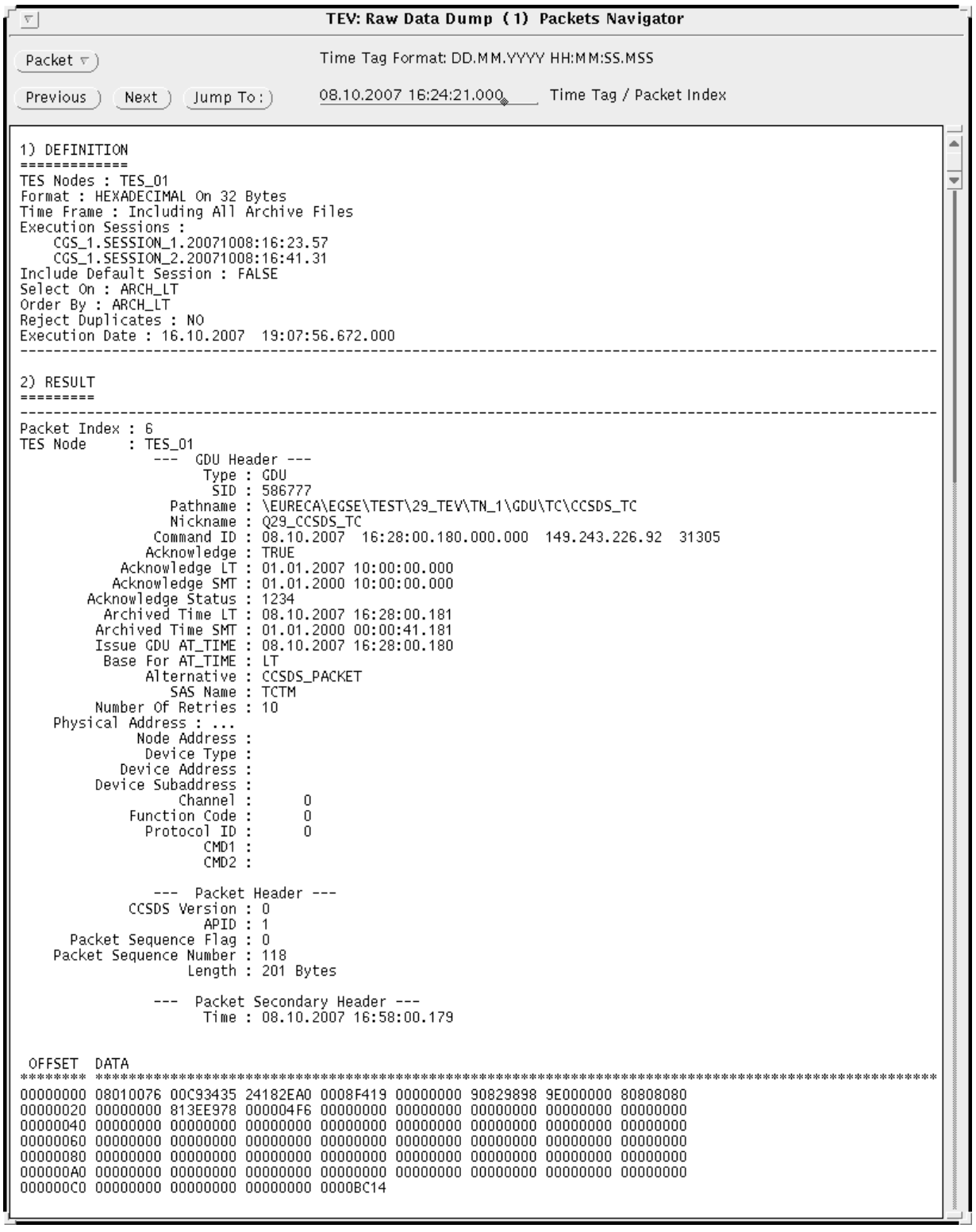
4.6.13 TEV - EVALUATION TOOL

- Sorting of data from archive files (SPR-100127)

  The Raw Data Dump Tool user interface was changed:

TEV: Raw Data Dump (1)
Definition
Result
Edit Format
Format: TXT ADT
Select On: Undefined Arch SMT Arch LT SMT LT PT Alt: Undefined Arch SMT Arch LT SMT LT PT
Order By: Undefined Arch SMT Arch LT SMT LT PT Alt: Undefined Arch SMT Arch LT SMT LT PT
Reject Duplicates
Time Frame Format: DD.MM.YYYY HH:MM:SS.MSS
Session Time Frame : From 08.10.2007 16:24:21.000 To 08.10.2007 16:46:08.000
Select Initial Time Frame
From an Execution Sessi...
From User Events...
Selected Time Frame : From To
First selected User Event :
Last selected User Event :
TES Node: TES_01
Data Units: ADUs GDUs ADUs + GDUs
Select ADUs And GDUs From Mission Database:
Pathname:
Select ADUs...
Select All ADUs
Select GDUs...
Select All GDUs
Select ADUs And GDUs From Archive:
Select ADUs...
Select GDUs...
No Of ADUs Selected: 5
No Of GDUs Selected: 3
Nicknames
Pathnames
Q29_CCSDS1_B \EURECA\EGSE\TEST\29_TEV\TN_1\A
Q29_CCSDS1_A \EURECA\EGSE\TEST\29_TEV\TN_1\A
Q29_STRUC1_A \EURECA\EGSE\TEST\29_TEV\TN_1\A
Q29_STRUC1_B \EURECA\EGSE\TEST\29_TEV\TN_1\A
Q29_UNSTR1_A \EURECA\EGSE\TEST\29_TEV\TN_1\A
Nicknames
Pathnames
Q29_CCSDS_TC \EURECA\EGSE\TEST\29_TEV\TN
Q29_ANA_STIMULUS \EURECA\EGSE\TEST\29_TEV\TN
Q29_DISC_STIMULUS \EURECA\EGSE\TEST\29_TEV\TN
Selecting Items : Ok.

Copyright by Astrium - All Rights Reserved


TEV: Raw Data Dump (1) Packets Navigator
Packet
Time Tag Format: DD.MM.YYYY HH:MM:SS.MSS
Previous
Next
Jump To:
08.10.2007 16:24:21.000
Time Tag / Packet Index
1) DEFINITION
TES Nodes : TES_01
Format : HEXADECIMAL On 32 Bytes
Time Frame : Including All Archive Files
Execution Sessions :
CGS_1.SESSION_1.20071008:16:23.57
CGS_1.SESSION_2.20071008:16:41.31
Include Default Session : FALSE
Select On : ARCH_LT
Order By : ARCH_LT
Reject Duplicates : NO
Execution Date : 16.10.2007 19:07:56.672
2) RESULT
Packet Index : 6
TES Node : TES_01
--- GDU Header ---
Type : GDU
SID : 586777
Pathname : \EURECA\EGSE\TEST\29_TEV\TN_1\GDU\TC\CCSDS_TC
Nickname : Q29_CCSDS_TC
Command ID : 08.10.2007 16:28:00.180.000.000 149.243.226.92 31305
Acknowledge : TRUE
Acknowledge LT : 01.01.2007 10:00:00.000
Acknowledge SMT : 01.01.2000 10:00:00.000
Acknowledge Status : 1234
Archived Time LT : 08.10.2007 16:28:00.181
Archived Time SMT : 01.01.2000 00:00:41.181
Issue GDU AT_TIME : 08.10.2007 16:28:00.180
Base For AT_TIME : LT
Alternative : CCSDS_PACKET
SAS Name : TCTM
Number Of Retries : 10
Physical Address : ...
Node Address :
Device Type :
Device Address :
Device Subaddress :
Channel : 0
Function Code : 0
Protocol ID : 0
CMD1 :
CMD2 :
--- Packet Header ---
CCSDS Version : 0
APID : 1
Packet Sequence Flag : 0
Packet Sequence Number : 118
Length : 201 Bytes
--- Packet Secondary Header ---
Time : 08.10.2007 16:58:00.179
OFFSET DATA
00000000 08010076 00C93435 24182EA0 0008F419 00000000 90829898 9E000000 80808080
00000020 00000000 813EE978 000004F6 00000000 00000000 00000000 00000000 00000000
00000040 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000060 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000080 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
000000A0 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
000000C0 00000000 00000000 00000000 0000BC14

Copyright by Astrium - All Rights Reserved

4.6.14 Raw Data Dump Tool including Packets Navigator

The packet time (PT) of CCSDS packets (from secondary header) is now listed.

New filter options are provided:

- Select On : Arch LT, Arch SMT, PT, Undefined (in addition to LT and SMT)
  - LT : select on local time as found in ADU/GDU (AT_TIME of GDU, if AT_TIME base is LT)
  - SMT : select on (simulated) mission time as found in ADU/GDU (AT_TIME of GDU, if AT_TIME base is SMT)
  - Undefined : no selection with respect to the selected time frame is applied (selected time frame is ignored)
  - Arch LT : select on local time when packet was received and archived by TES
  - Arch SMT : select on (simulated) mission time when packet was received and archived by TES
  - PT : select on packet time (from secondary header of CCSDS packet, i.e. packet generation time (TM packet) resp. onboard execution time (TC packet)
- Alt Select On : if Select On is set to PT, allows to select all non-CCSDS raw data packets on LT, SMT, Arch LT, Arch SMT, PT, Undefined (if set to PT, all non-CCSDS raw data packets are discarded since there is no packet time, thus this filter option allows to reject all non-CCSDS packets)
  - LT : see above
  - SMT : see above
  - Undefined : see above
  - Arch LT : see above
  - Arch SMT : see above
  - PT : there is no packet time for non-CCSDS packet data, thus this filter option allows to reject all non-CCSDS packet data

  In definitions in text format the additional values are ARCH_LT, ARCH_SMT, PT and UNDEFINED.
- Reject Duplicates : if enabled, duplicate CCSDS packets are ignored, i.e. multiple ADUs/GDUs with the same SID, time tag corresponding to the current "Order By" option and the same sequence count (from primary header of CCSDS packet); note: to reject duplicates, usually Order By should be set to PT; in definitions in text format the corresponding new key is REJECT_DUPLICATES, valid values are YES and NO

Copyright by Astrium - All Rights Reserved

- Data Units : allows to select only ADUs, only GDUs or both ADUs and GDUs; if no specific ADUs or GDUs are selected in the lower lists, the filter is applied to all raw data packets in the archive; otherwise if there is at least one specific ADU or GDU selected, the filter is applied to these selected items (e.g. if the filter is set to GDUs and only specific ADUs but no GDUs are selected in the lower lists, the result will be empty); in definitions in text format the corresponding new key is DATA_UNITS, valid values are ADUS, GDUS and ADUS_GDUS

- TES Node : the TES node is now an optional filter criterion, if no TES node is specified, raw data packets from all TES nodes involved in the selected execution sessions are included; in definitions in text format the key TES_NODE should be used instead of PRODUCER

- Select ADUs...

  in the Pathname text field the name of a virtual node must be specified, then a selection list dialog is opened providing all ADUs located in the subtree under the virtual node specified allowing to pick one or more ADUs to be added to the list of selected ADUs

- Select All ADUs

  in the Pathname text field the name of an ADU or a virtual node must be specified, the ADU specified or all ADUs located in the subtree under the virtual node specified are added to the list of selected ADUs

- Select GDUs...

  in the Pathname text field the name of a virtual node must be specified, then a selection list dialog is opened providing all GDUs located in the subtree under the virtual node specified allowing to pick one or more GDUs to be added to the list of selected GDUs

- Select All GDUs

  in the Pathname text field the name of a GDU or a virtual node must be specified, the GDU specified or all GDUs located in the subtree under the virtual node specified are added to the list of selected GDUs

New ordering options are provided:

- Order By : Arch LT, Arch SMT, PT, Undefined (in addition to LT and SMT)

  - LT : order by local time as found in ADU/GDU (AT_TIME of GDU, if AT_TIME base is LT)

  - SMT : order by (simulated) mission time as found in ADU/GDU (AT_TIME of GDU, if AT_TIME base is SMT)

  - Undefined : no ordering is applied

  - Arch LT : order by local time when packet was received and archived by TES

Copyright by Astrium - All Rights Reserved

- Arch SMT : order by (simulated) mission time when packet was received and archived by TES
- PT : order by packet time (from secondary header of CCSDS packet, i.e. packet generation time (TM packet) resp. onboard execution time (TC packet)

▪ Alt Order By : if Order By is set to PT, allows to sort into all non-CCSDS raw data packets by LT, SMT, Arch LT, Arch SMT, PT, Undefined

- LT : see above
- SMT : see above
- Undefined : see above
- Arch LT : see above
- Arch SMT : see above
- PT : there is no packet time for non-CCSDS packet data, thus this filter option allows to reject all non-CCSDS packet data

In definitions in text format the additional values are ARCH_LT, ARCH_SMT, PT and UNDEFINED.

4.6.15 Packets Navigator

"Jump To" now supports jumping to a packet based on a packet index (an integer value) specified in the associated text field. Indices start at 1, a negative index counts from the end (i.e. -1 denotes the last packet, -2 the last but one packet, etc.).

4.6.16 Data Set Tool including One Shot Data Listing

TES Node : The TES node is now an optional filter criterion, if no TES node is specified, data from all TES nodes involved in the selected execution sessions is included.

In definitions in text format the key TES_NODE should be used instead of TEST_NODE.

4.6.17 One Shot Graph (available only for TEV Batch)

TES Node : The TES node is now an optional filter criterion, if no TES node is specified, data from all TES nodes involved in the selected execution sessions is included.

In definitions in text format the key TES_NODE should be used instead of PRODUCER.

4.6.18 Incompatibilities with respect to CGS 6.3

Definitions for the Raw Data Dump Tool saved with TEV Interactive in CGS 6.3 (i.e. definitions in binary format) cannot be used any more, they should be deleted.

Copyright by Astrium - All Rights Reserved

4.7 SW PROBLEM STATUS

4.7.1 SPR Status and Impact Analysis

For this release 126 SPR's are solved.

ID▲	TITLE
SPR-13770	Wrong value range in synoptic display chart
SPR-14238	GDU format in Raw Data Dump incomplete
SPR-15892	Canvas_list can not handle 5000 elements
SPR-15920	batch with '*' in filename does nor work
SPR-16217	TEV: 'Data Location'/'On Line Data' malfunction
SPR-16673	CLS batch compile slowed down by output window
SPR-16791	Long pathnames in 'Direct End Item Access' window
SPR-16809	CC: CGS-ERR-0010 check skips referenced double float items
SPR-16919	Unexpected exception (XREF_ERROR) in COMPILE
SPR-100127	No sorting of archived data by time it was produced
SPR-100478	Extend EventDistributorDaemon to send messages/events via UDP Multicast
SPR-100614	Output value calibration in MCS
SPR-100616	PROGRAM_ERROR reported by CIS in message window
SPR-100823	CONSTRAINT_ERROR@socket-alive_msg_info.adb:279
SPR-100827	Extending TM Request failed
SPR-100837	Possible deadlock in HCI
SPR-100885	USS Editor: Some Handling Problems with Standard USS Editor Functions
SPR-100893	USS editor cannot store changed display
SPR-100927	DATABASE ERROR reported by I_MDB
SPR-100962	USS Editor: Tooltip not updated with MDB contents
SPR-101000	remove configuration file $CGS_HOME/etc/tss_conf_file in delivery
SPR-101021	Use a different MDB enditem type for USS libraries
SPR-101028	quick line graph problems for high frequent data
SPR-101055	acquisition status indication of aborted data deliveries not possible for housekeeping items
SPR-101070	start_center not able to handler large output
SPR-101071	Oracle RAC Failover: IMDB may cause KDE to hang
SPR-101082	USS editor creates superflouous directory named CCU_7 when started
SPR-101088	USS Editor: Missing Cursor indication when USS Editor is busy
SPR-101089	USS Editor: SCOE File Browser does not start with actual location
SPR-101090	USS Editor: Uncaught Java Exception after paste operation
SPR-101105	UCL Debugger: Enditem for SID 0 could not be loaded
SPR-101119	TEV reports to stderr, but not to message handler
SPR-101122	Investigate Fatal_Error in Data_Distributor
SPR-101128	HLCL login sequence may delay client's next HLCL command
SPR-101136	Input Combo Box not supported by the USS Editor
SPR-101149	Aunit source code is out-dated
SPR-101150	Status error reported by TES
SPR-101152	Environment variables VICOS_LASER_1 & 2 should be deleted
SPR-101156	configuration.sh contains root password and & (ampersand)

Copyright by Astrium - All Rights Reserved

SPR-101163 XML SCOE file generation for USS
SPR-101170 XML SCOE file generation for USS (B)
SPR-101174 USS Quick Line Graph not working with special time configuration
SPR-101176 Problem deleting archived Execution Sessions
SPR-101179 USS Editor Couldn't Change sync-directory-file (multi user)
SPR-101199 TES reports NWSW error during shutdown
SPR-101204 Exception name: PROGRAM_ERROR
SPR-101207 TSCV: Set nodes not defined in system topology to not participating
SPR-101214 confusing output from start_tss_tsp
SPR-101215 USS: New Function "Undock All"
SPR-101218 CIS reports: Error in DBS_RPI-COMMAND_HISTORY.SUBSCRIBE_TASK during shutdown
SPR-101219 USS Editor: MDB Path function not working correctly during drag-and-drop in data Source Editor
SPR-101220 USS Editor: Size of Data Field changes after re-assignment of new measurements
SPR-101225 Erroneous user privilege checking
SPR-101226 NWSW Exception occured during TES shutdown
SPR-101227 TEV doesn't start, if ORACLE_SID is not defined
SPR-101230 HCI_STOP: reports FATAL_ERROR on console
SPR-101231 USS: Clipping of long text in data field
SPR-101239 NWSW: Cb_Msg_Recv is called before Cb_Conn_Req_Occ is finished
SPR-101240 CIS: decouple long duration actions from Cb_Msg_Recv
SPR-101241 USS 2.9.0 does not display TSCV replay data
SPR-101242 stored MDB procedures used in USS may fail
SPR-101243 CU Version Manger deletes references in wrong CCU
SPR-101246 TES: Exception Raised - Constraint Error
SPR-101247 Monitoring APs and Condition APs differently handled
SPR-101250 USS Editor: Opsname references to be updated automatically
SPR-101256 TSCV Consistency: Check Box Not Disabled Together With Generate Data Button
SPR-101260 priv tool: Posix error 37
SPR-101261 CIS accepts client logins during shutdown
SPR-101263 USS Editor stores invalid MDB Pathname into Cross-Ref List of HK Display
SPR-101264 DDED no longer operable after failed to store item due to locking by "other process"
SPR-101265 Install TRDB/CMDH via Configurator failes
SPR-101266 Sporadic IMDB crashes with STORAGE_ERROR exception
SPR-101268 USS Editor: Status Propagation Flag shall be set by default for computations
SPR-101269 DBS problems while writing converted OB-Events into TRDB
SPR-101270 Starting of USS Editor from single-screen Workstation fails
SPR-101271 CGS: Invalid Monitoring State when data is not received
SPR-101272 TSCV in batch mode: Wrong SCOE version check
SPR-101274 CCU import failed into empty MCS 3.0.1 MDB
SPR-101277 raised CONSTRAINT_ERROR : simple_canvas.adb:403 access check failed
SPR-101278 Some UCL System Library Commands are not available in HLCL
SPR-101288 Process_Creation_Server leaves files
SPR-101290 CIS does not recognize TES status code 303
SPR-101295 Sporadic CCU export crashes with STORAGE_ERROR exception
SPR-101296 Allow upload of a set of USS displays from file system to MDB

Copyright by Astrium - All Rights Reserved

SPR-101297 CGS Start Center: Process 'Global Configuration' could not be started
SPR-101298 User Manual: TSCV section still describes user profile maintenance
SPR-101300 USS display items not updated after CIS re-connect
SPR-101301 Error in CGS Installation manual CGS-RIBRE-SUM-0002 2B
SPR-101311 DBS : Exception occurred: OCI.ORACLE_ERROR
SPR-101312 TSCV replay fills test node hard disk
SPR-101315 Test Session cannot be opened
SPR-101317 CGS start center: missing capability to get output of all output windows
SPR-101318 CGS Tools throws exception due to wrong HK value provided by CIS
SPR-101320 CIS does not recognize TES status code 303
SPR-101321 CIS does not recognize TES status code 303
SPR-101322 Lat and current sequence number nit reported for out-of-sequence data deliveries
SPR-101323 CORBA.COMM_FAILURE not handled by CIS
SPR-101325 MDB Export: MDB_UNIX_IF not visible in TMP MDB
SPR-101327 installation of oracle user with "-" character in name fails
SPR-101328 CGS User manual improvement
SPR-101329 TM-Verification log in command history not sufficient
SPR-101331 Session list not updated in TSCV
SPR-101332 CGS User Manual, Missing Dynamic String description
SPR-101334 USS and HCI Display Data do not show missing TES-CIS connection
SPR-101338 CGS Tools doesn't display user defined HK values
SPR-101341 TES process not started correct
SPR-101342 TEV: DataViewer not started
SPR-101345 CONSTRAINT_ERROR raised during CIS shutdown
SPR-101346 configuration editor reports invalid XML syntax.
SPR-101347 start_center: allow cyclic checking of precondition
SPR-101348 DBS: Error in CEN_TAB_MANA.FLUSH_EVENT_BUFFERS.
SPR-101349 Missing warning: ADU packet length violation
SPR-101350 Some Online Control (HCI) Icons Still Contain "Test"
SPR-101354 Synoptic Q25_RT_LINE not loaded due to DV_ERROR
SPR-101360 MDB: import with warnings
SPR-101361 TEV: Node text field is case sensitive
SPR-101364 DDED: Oracle error
SPR-101368 CLS: CONSTRAINT_ERROR: command_panel.adb:565 discriminant check failed
SPR-101371 TSCV : No data are to be replayed by the MTP node.
SPR-101375 TES: increases memory consumption
SPR-101376 TES: increases memory consumption
SPR-101378 DBS: SET_SESSION_CLOSE_TIME returns SESSION_NOT_FOUND
SPR-101379 TSCV : MPS_DEFINITIONS.USE_ERROR
SPR-101386 IMDB: restrict USS Editor invocation to CCU scope
SPR-101393 CIS: no TM data sent to reconnected client
SPR-101394 Startup problems with the CIS on CTM WS

Copyright by Astrium - All Rights Reserved

4.7.2 Temporary Fixed Problems

4.7.3 Further Open Problems

- SPR-100844 - It is not possible to align dynamic string parameter. CGS can handle unaligned parameter only.
- SPR-100868 - SAS linked with the CGS API and using posix.process_primitives.exit_process are hanging. Use the system call _exit (not exit !) instead of posix.process_primitives.exit_process.

4.7.4 Known Restrictions

- It is not possible to prepare a telecommand (SWOP, FLAP, PUS_TC, and TC) via CIS, if this telecommand is defined with garded parameters in the parameter lists.
- SPR-101245 - CIS clients to implement sufficient large timeouts that can deal with a 10 seconds delay of 'Login' or 'subscribe<service>' requests.
- Not all interfaces for the new CGS IDL 2.0 are implemented in CGS:

  Note: unsupported `'oneway void'` calls are stubs, just generating a debug message `'<Procedure_Name> -- to be implemented --'` with debug output enabled.

  o - not (yet) supported by CGS:

  - Calibration description as telemetry property:
    - not yet supported by CGS: no calibration updates are sent by CIS
  - Telemetry report deliveries:
    - Telemetry data reports not yet supported:
    - `Telemetry.getTelemetryReport` raises `ServiceNotAvailable`.
    - `Telemetry.cancelTelemetryReport` is empty.
    - `TelemetryClient.telemetryReportDelivery` is never called by CIS.

4.7.5 Known Bugs and Workarounds

- Symptom: USS MDB Display Exporter is started twice
- Symptom: Generate SCOE Files reports "Unsupported newer USS file version (N > 3)"

  If an early access version of USS has been integrated by hand, it must be removed. Check if there is a shell script $CGS_HOME/etc/project/pre_generate_scoe_files containing a call to USS_EXPORTER. If USS_EXPORTER is the only reference, remove the complete shell script. If there are other references, remove Only the section containing the code calling USS_EXPORTER.

  ➢ Remove integration of USS Early Access Versions (USS Versions less than 2.6.1).

Copyright by Astrium - All Rights Reserved

5 Installation Procedures

This software shall be used on Intel PC with SUSE Linux Enterpriser Server 8 (SLES8).

5.1 Complete Installation

For a complete installation follow the instructions of CGS installation manual ref. [AD 2].

Remark: The actual CGS installation manual is on CD below /<mountpoint>/doc/manual.

5.2 Patch Installation (based on CGS 6.3.6)

For a patch installation follow the next instructions:

5.2.1 Needed passwords

```
1. <cgsadmin>    (UNIX user)
2. root          (UNIX user)
3. <MDB_ADM>     (oracle user)
```

5.2.2 Installation steps

```
1. login as <cgsadmin> on DB server host

2. cgs shutdown via task_selector / cgs start_center

3. stop command history / central distributor (on command history server)
   in shell: $CGS_HOME/gsaf/dbs/bin/common/stop_cmd_history
   in shell: $CGS_HOME/gsaf/dbs/bin/common/stop_central_distributor

4. quit task_selector / cgs start_center

5. terminate the cgs_daemon
   in shell: killall -9 cgs_daemon

6. insert CGS basic CD CGS_6.4.0

7. mount CD

8. install all products from CD
    in shell: /<mountpoint>/installer.sh

    Select Continue, Continue, Install,           -- for CGS
           Previous, TOOLS,   Continue, Install   -- for TOOLS
           Exit

9. unmount CD

10.  register version
     in shell: vit_manager -upd_item cgs VERSION 6.4.0

11.  insert CGS optional CD CGS_6.4.0
     REMARK: This and the next four steps are optional, but CGS recommends
             strongly to install gsaf part of optional CD.
```


Copyright by Astrium - All Rights Reserved

12. mount CD

13. install all optional products from CD
    in shell: /<mountpoint>/installer.sh

    Select Continue, Continue, Install, -- for CGS optional
    Previous,

    Select for **Installation Source** path /<mountpoint>/addon

    Continue, Install -- for add-ons (unsupported)
    Exit

14. unmount CD

15. register version
    in shell: vit_manager -upd_item cgs_optional VERSION 6.4.0

16. update the MDB / MDB stored procedures

    in shell:

    $CGS_HOME/patches/patch_mdb.sh

    -- needs ca. 5 minutes

    verify output: MDB patch successfully installed

    REMARK: The next command is only necessary for an update of the internal data structure of the MDB (e.g. new data structure delivery for extended databases (user defined data types)). During initialization all user entries in the flexible tool invocation and flexible reports are deleted.

    This command is optional and the usage shall be decided by projects.

    $CGS_HOME/gsaf/mda/config/mdb/install/admin_scripts/initialize_mdb

    $CGS_HOME/gsaf/mda/config/mdb/install/admin_scripts/update_plsql_stored_procedures

    REMARK: The next command is only necessary for a better performance of MDB access.

    This command is optional and the usage shall be decided by projects.

    $CGS_HOME/gsaf/mda/config/mdb/install/admin_scripts/gather_mdb_stats

17. update configuration.xml
    in shell: cd $CGS_HOME/etc/
    cp ./configuration.xml ./configuration.xml.save
    chmod +w ./configuration.xml
    config upgrade ./configuration.xml cgs_configuration_defaults.xml

    config is $CGS_HOME/gsaf/cgsi/bin/linuxi/config

18. update start_center.xml
    in shell: cd $CGS_HOME/etc/
    cp ./start_center.xml ./start_center.xml.save
    chmod +w ./start_center.xml
    config upgrade ./start_center.xml start_center/start_center.xml

19. build your SAS with the new CGS API (not required, **but recommended**)

20. reboot server and if the server is ready, reboot all clients

Copyright by Astrium - All Rights Reserved

5.3 Oracle RAC installation for CGS

5.3.1 Prerequisites

CGS was tested with ORACLE RAC 10gR2 (Version 10.2.0.2) running on SuSE SLES9 SP2. To install CGS on ORACLE 10gR2 Oracle 9.2.5 must be installed on one of the CGS client machines. Also the CGS_HOME directory must be available on this client machine. The installation of the Oracle instance and the CGS tablespaces will not be done with help of CGS installation configurator.

5.3.2 Oracle RAC installation

Follow installation instructions of ORACLE 10gR2. provided by ORACLE

5.3.3 Oracle Database Instance Creation

The database instance used for CGS databases can be created with dbca tool from ORACLE when logged in on the database cluster as ORACLE administrator user. The database can be created from General Purpose database template. Note, that the database must be created with US7ASCII character set! The database must use automatic storage management.

After creation of the database instance the $ORACLE_HOME/network/admin/tnsnames file on the client which will be used for the CGS database installation must be adapted. An example entry is shown below:

```
cgscl1 =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = cgscl1-vip)(PORT = 1521))
    (ADDRESS = (PROTOCOL = TCP)(HOST = cgscl2-vip)(PORT = 1521))
    (LOAD_BALANCE = yes)
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = cldb1.astrium)
      (FAILOVER_MODE =
        (BACKUP = cldb1.astrium)
        (TYPE = SELECT)
        (METHOD = PRECONNECT)
        (RETRIES = 180)
        (DELAY = 5)
      )
    )
  )
```

This adaptation must be done on each CGS client machine which uses the database cluster. After adaptation of the tnsnames file login as CGS Administrator. At first you have to start the CGS configurator and to change the value for the TWO_TASK variable. Save the configuration and create the dotfiles. Logout and again login as CGS Administrator. Check with sqlplus that the new TWO_TASK is working and a correct connection to the cluster dabase can be established.

5.3.4 CGS Tablespace creation

CGS needs tablespaces for the following products:

- Mission Database

Copyright by Astrium - All Rights Reserved

- Result Database
- Command History

The CGS script "create_tablespaces" for the creation of the CGS tablespaceses requires an database which uses ORACLE automatic storage management. The script is located in $CGS_HOME/gsaf/cgsi/config/Oracle/rac. The script needs as parameter the name of the application for which the tablespaces will be created. To create the tablespaces for the mission database login as CGS administrator on the client host and execute the command:

```
cd $CGS_HOME/gsaf/cgsi/config/Oracle/rac/
./create_tablespaces -mdb
```

At next some privileges for the database must be configured. Execute the following commands:

```
cd $CGS_HOME/gsaf/cgsi/config/Oracle/rac/
./create_addational_grants
```

5.3.5 Installation CGS application databases

When using RAC the CGS databases will not be installed with help of CGS installation configurator. The installation scripts must be executed on command line. The mission database can be installed by executing the following commands on the client machine as CGS administrator:

```
$CGS_HOME/gsaf/mda/config/mdb/install/admin_scripts/install_mdb
$CGS_HOME/gsaf/mda/config/mdb/install/admin_scripts/initialize_mdb
```

The result database can be installed by executing the following commands on the client machine as CGS administrator:

```
$CGS_HOME/gsaf/dbs/util/common/install_trdb rac
```

The database for the command history application can be installed by executing the following commands on the client machine as CGS administrator:

```
$CGS_HOME/gsaf/dbs/util/common/command_history/install_cmd_history rac
```

Beginning from now the normal CGS installation actions can be followed.

Copyright by Astrium - All Rights Reserved

6. Acronyms

AD	Applicable Document
ADD	Architectural Design Document
AP	Automated Procedure
ASCII	Americal Standard Code for Information Interchange
ATP	Authorization to Proceed
ATV	Autonomous Transfer Vehicle
CCB	Configuration Control Board
CCU	Configuration Control Unit
CCSDS	Consultative Commitee for Space Data System
CGS	Core Ground System
CDU	Configuration Data Unit
CLS	CGS Language System
COTS	Commercial Off-The-Shelve
CPL	Crew Procedure Language
CPU	Central Processing Unit
D&D	Design and Development
DMS	Data Management System
DOF	Degree of Freedom
EGSE	Electrical Ground Support Equipment
EM	Engineering Model
EQM	Engineering Qualification Model
ESA	European Space Agency
ETM	Electrical Test Model
FDIR	Fault Detection, Isolation and Recovery
FM	Flight Model
GMT	Greenwich Mean Time
GNC	Guidance Navigation Control
GPS	Global Positioning System
HCI	Human-Computer Interface
HL	High Level
HLCL	High Level Command Language
HW	Hardware
ICD	Interface Control Document
IF	InterFace
ISS	International Space Station
LL	Low Level
MDB	Mission Database
MET	Mission Elapsed Time
MMS	Matra Marconi Space
N/A	Not Applicable
PDB	Project Data Base
PROM	Programmable Read Only Memory
RAM	Random Access Memory
RD	Reference Document
RFW	Request for Waiver
ROM	Read Only Memory
RV	RendezVous
S/C	SpaceCraft
SCCB	Software Configuration Control Board
SOC	Statement of Compliance
SPR	Software Problem Report
SRD	Software Requirements Document

Copyright by Astrium - All Rights Reserved

SUM	Software User Manual
SW	SoftWare
SWRU	Software Replaceable Unit
TBC	To Be Confirmed
TBD	To Be Defined
TC	TeleCommand
TM	TeleMetry
TRR	Test Readiness Review
UCL	User Control Language
URD	User Requirements Document
UTC	Universal Time Coordinated
VCD	Verification Control Document
VTP	Validation Test Plan

Copyright by Astrium - All Rights Reserved